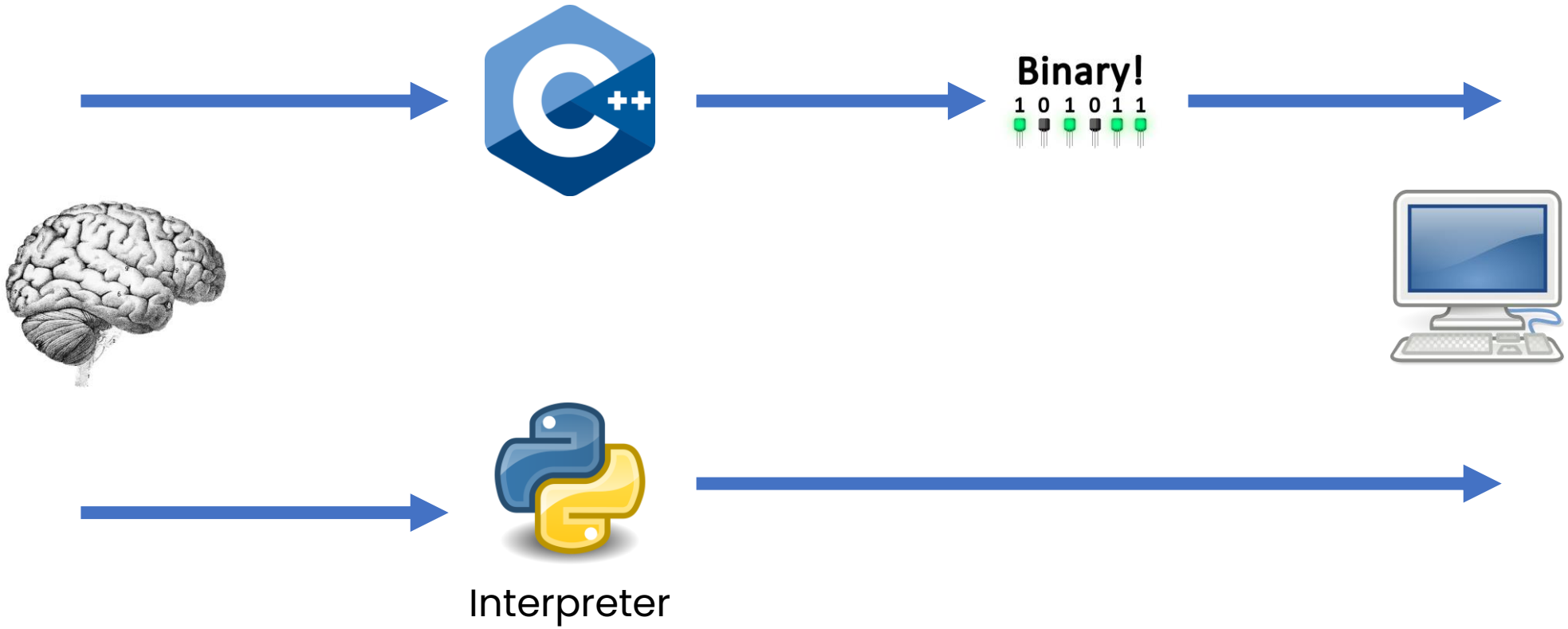
Pengenalan Bahasa Pemograman Python

Apa yang akan dipelajari?

- Sejarah Python
- Penggunaan Python
- Pros and Cons penggunaan Python
- *Library* Python
- *Tools* yang digunakan

Programming

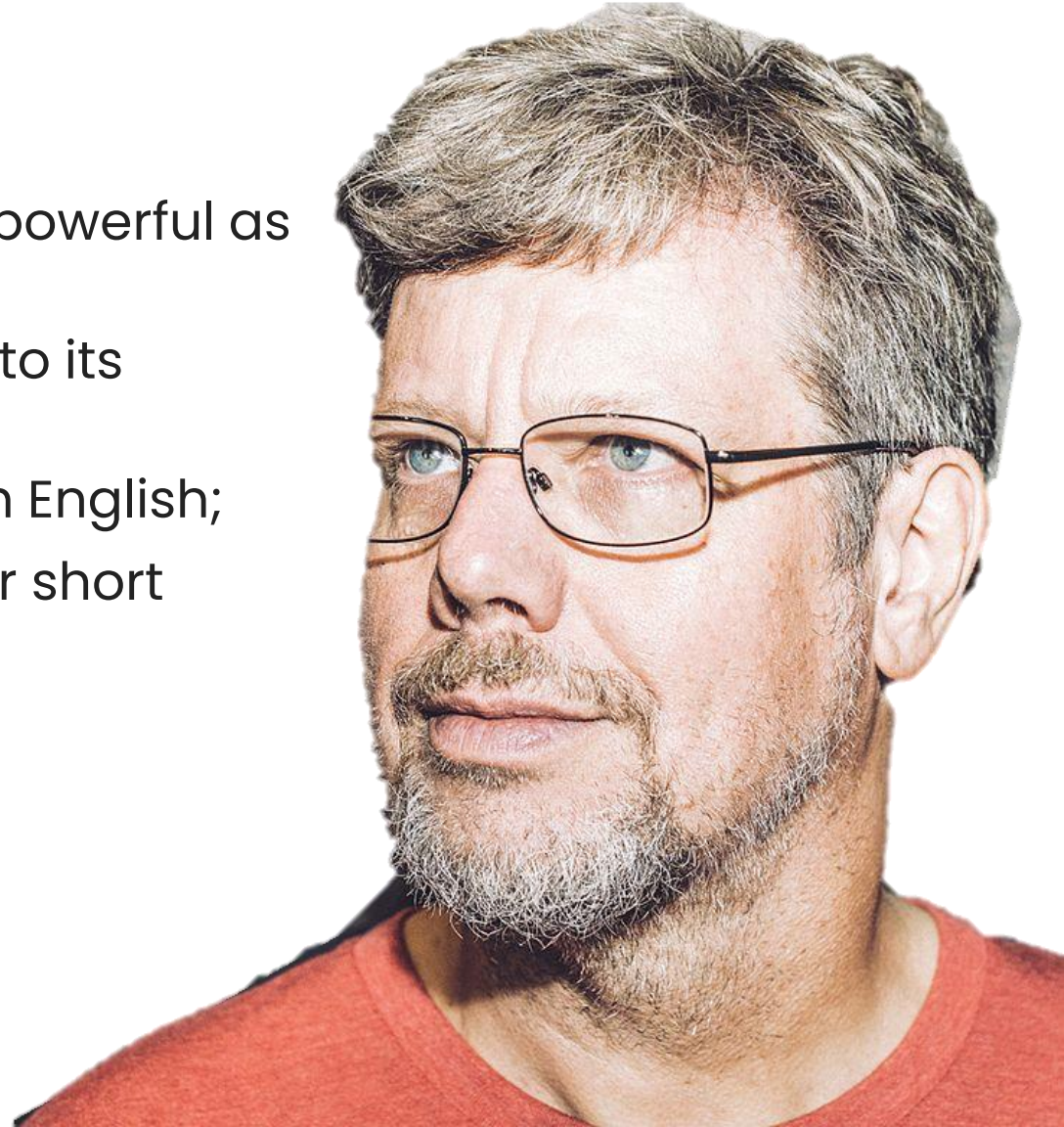


Fact's of Python

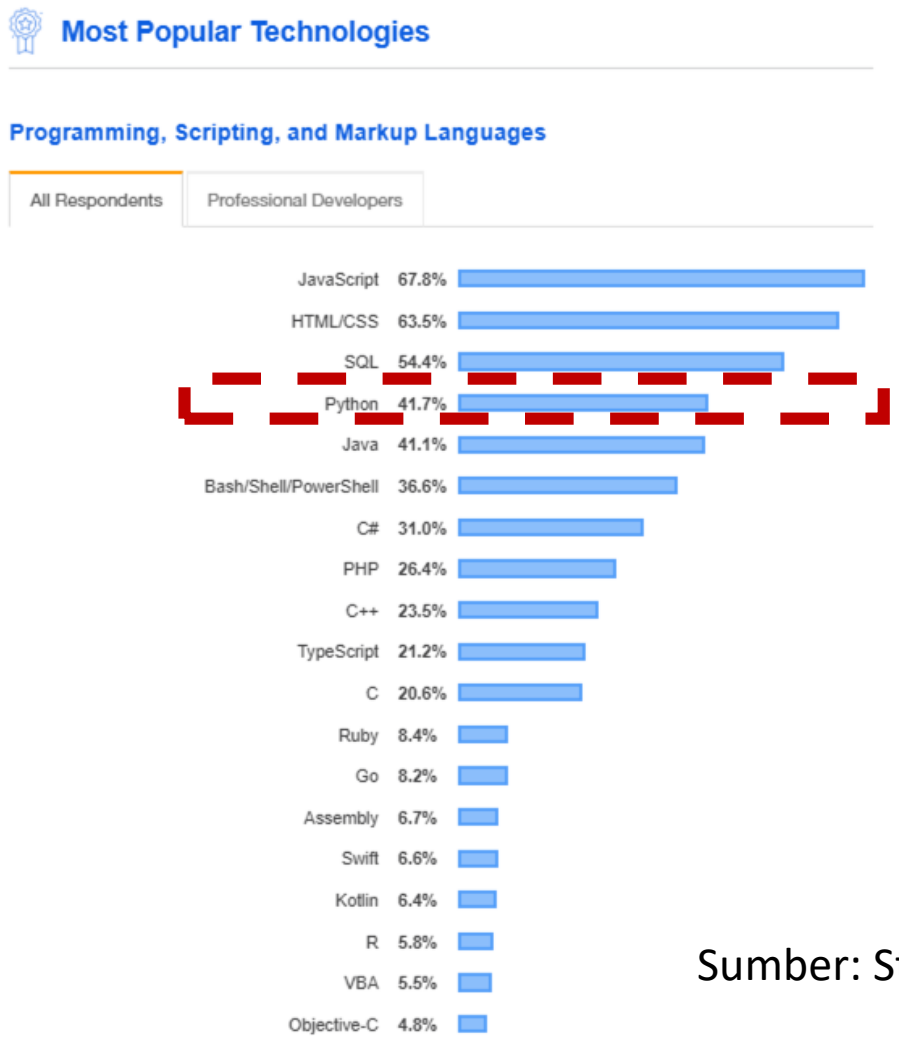
- Sebuah bahasa interpreter, object-oriented dan high-level
- General purposes programming
- Diciptakan oleh **GUIDO VAN ROSSUM**
- Nama Python terinspirasi oleh komedi televisi BBC **Monty Python's Fliying Circus**

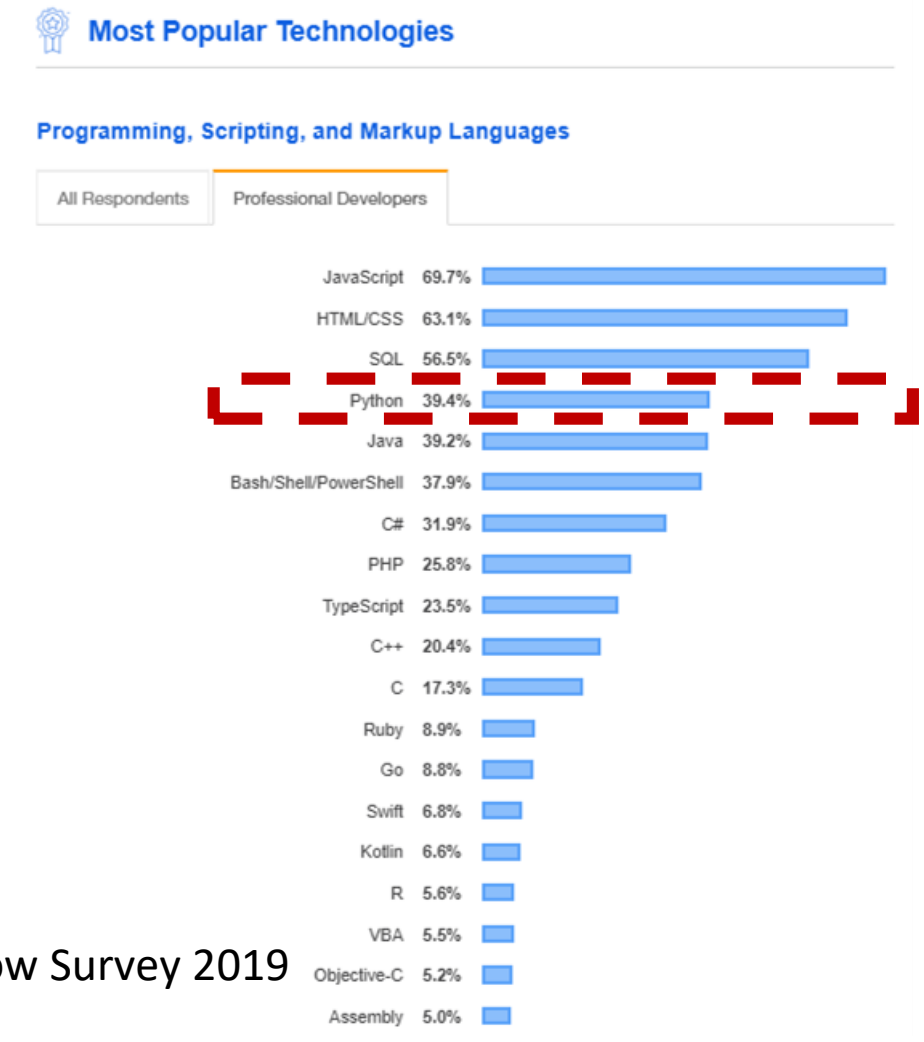
Python Goals

- an **easy and intuitive** language just as powerful as those of the major competitors;
- **open source**, so anyone can contribute to its development;
- code that is as **understandable** as plain English;
- **suitable for everyday tasks**, allowing for short development times.



Top Programming Language





Sumber: Stackoverflow Survey 2019

Penggunaan Python

Web Development

Scientific and Numeric

Software Development

Keunggulan dan Kekurangan

- **Mudah dipelajari**
- **Mendukung berbagai sistem dan platform**
- **Memudahkan pengembangan dengan sedikit koding**
- **Memudahkan deployment berbagai skala aplikasi**
- **Memiliki library yang besar untuk berbagai keperluan**

Keunggulan dan Kekurangan

- **Lambat**
- **Kurang baik untuk pengembangan aplikasi mobile**
- **Bukan pilihan baik untuk kegiatan yang memerlukan memory intensive**
- **Hampir mustahil untuk membangun high-graphic 3D games**
- **Keterbatasan akses pada database**
- **Bukan bahasa yang baik untuk pekerjaan multi-processor/multi-core**

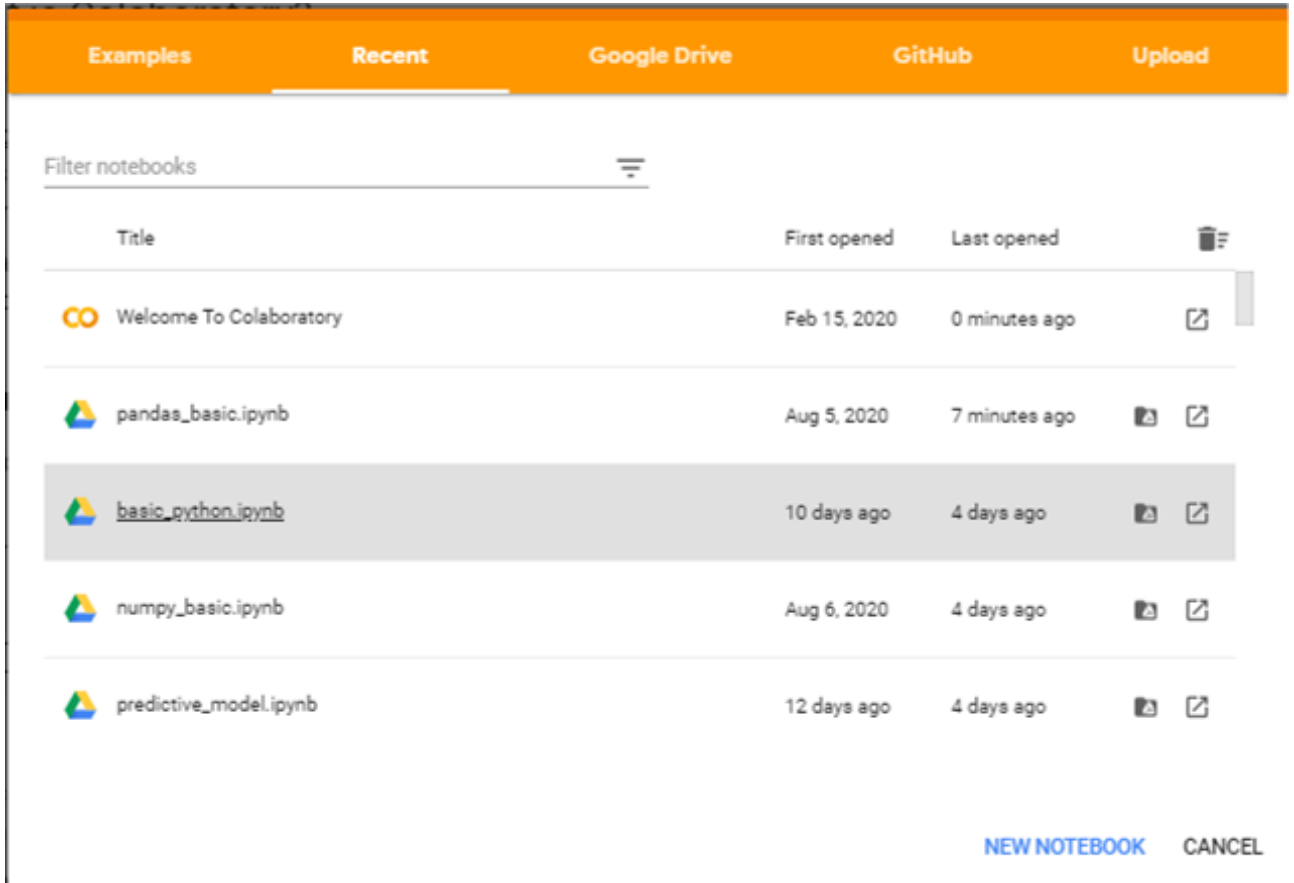
Google Colab

- Cloud service untuk mengakses jupyter notebook
- Digunakan untuk membuat dokumentasi data science
- Secara default, kita akan memperoleh resource:
  - 13 GB RAM
  - 130 GB Disk

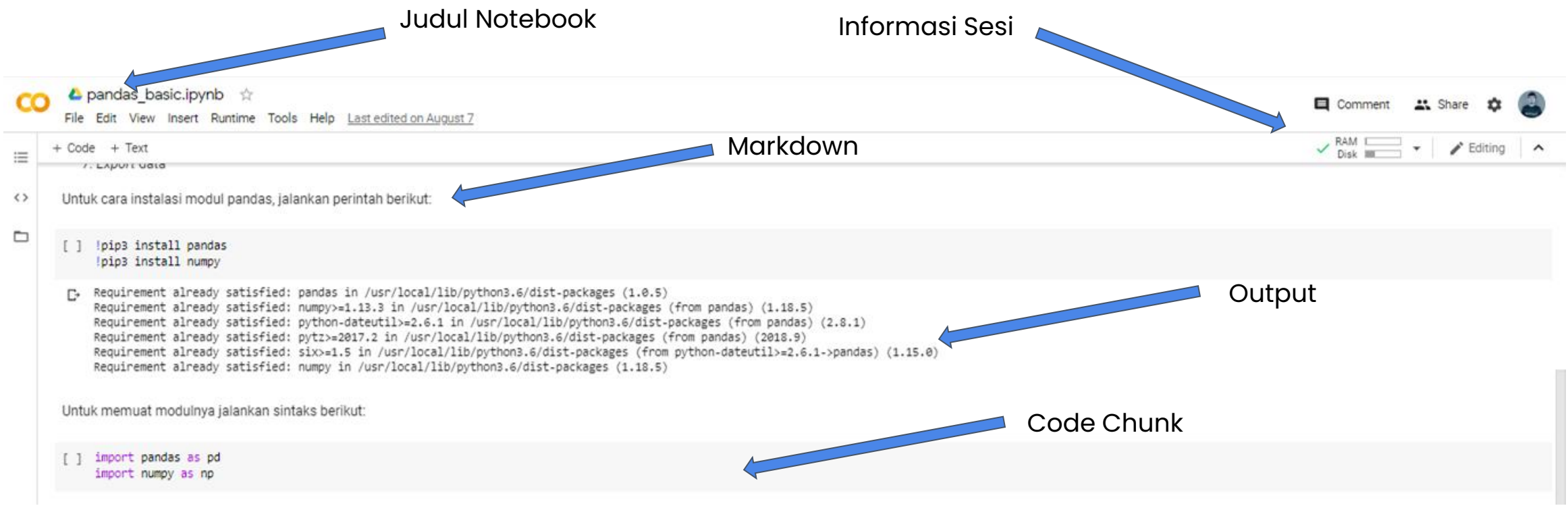
Apa yang perlu dipersiapkan?

Tahapan akses

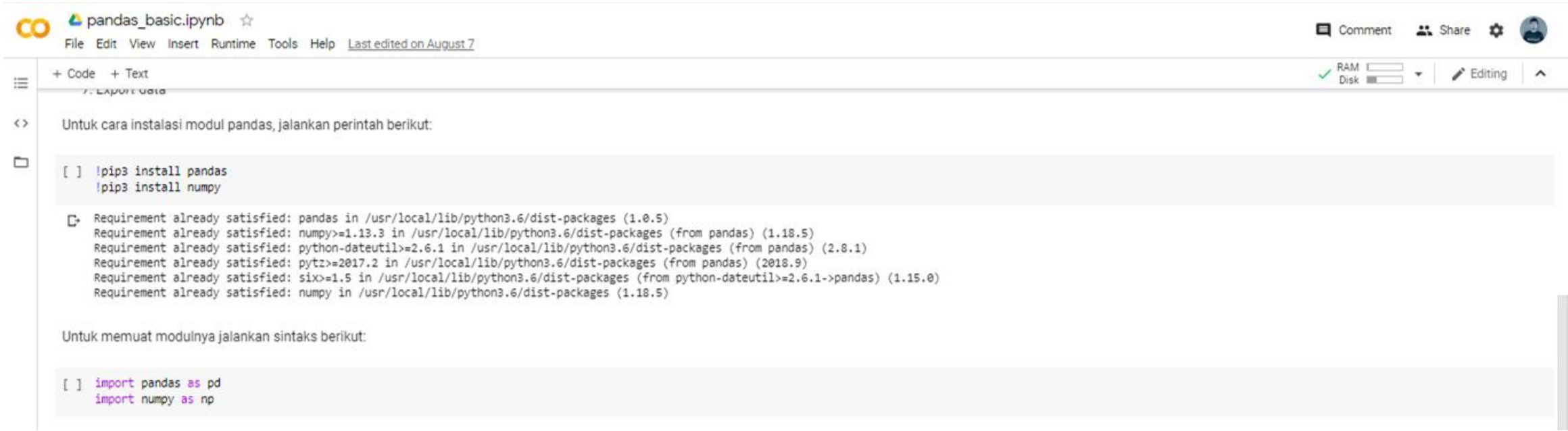
- **Kunjungi colab.research.google.com/**
- **Login ke akun gmail**
- **Untuk mulai membuat notebook,**
  klik New Notebook



Komponen Notebook



Let's Code!


pandas_basic.ipynb
File Edit View Insert Runtime Tools Help Last edited on August 7
Comment Share
+ Code + Text
RAM Disk
Editing
Untuk cara instalasi modul pandas, jalankan perintah berikut:
[ ] !pip3 install pandas
!pip3 install numpy
Requirement already satisfied: pandas in /usr/local/lib/python3.6/dist-packages (1.0.5)
Requirement already satisfied: numpy>=1.13.3 in /usr/local/lib/python3.6/dist-packages (from pandas) (1.18.5)
Requirement already satisfied: python-dateutil>=2.6.1 in /usr/local/lib/python3.6/dist-packages (from pandas) (2.8.1)
Requirement already satisfied: pytz>=2017.2 in /usr/local/lib/python3.6/dist-packages (from pandas) (2018.9)
Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.6/dist-packages (from python-dateutil>=2.6.1->pandas) (1.15.0)
Requirement already satisfied: numpy in /usr/local/lib/python3.6/dist-packages (1.18.5)
Untuk memuat modulnya jalankan sintaks berikut:
[ ] import pandas as pd
import numpy as np

What's Next?

Python for Data Analysis

Why Python for Data Analysis?
How to choose the right package?
What is the foundational package for scientific computing in Python?
How to make working with structured data fast,easy and expressive?